

On West Indian Reptiles in the Museum of Comparative Zoölogy, at Cambridge, Mass. By Samuel Garman.

(Read before the American Philosophical Society, October 7, 1887.)

The following list includes the snakes, turtles and crocodiles of the collection. A large proportion of them was collected by the writer, on opportunities provided by Prof. Alex. Agassiz; the remainder was secured by purchase from different collectors. Among the species there are a number not previously recognized; the ranges of others have been extended by the localities represented in the series.

In the snakes it is found necessary to place more than the usual stress on variation of the number of rows of scales, or of the number of scutes in the ventral and subcaudal series, since the representatives of a single species on one or another of the small islands may be distinguished by a couple of dorsal rows more or less, or by a few scutes more or less on the lower surface; variations that would have comparatively little value on the mainland, but which here derive importance from their fixity, a consequence of isolation. *Alsophis einereus*, as compared with *A. rufiventris*, furnishes a good illustration.

TYPHLOPS RICHARDI D. & B.

A specimen from St. Kitts island has twenty rows of scales, in 321 + 13 transverse series. In squamation it differs little from the species as described from St. Thomas.

STENOSTOMA ALBIFRONS Wagl.

One taken at Trinidad has its scales in fourteen rows, in 194 + 19 transverse series. It disagrees with others from Pará in having two broad shields cross the back immediately behind the first three of the median series, which are of the average size.

BOA CONSTRICTOR Linné.

Trinidad.

BOA DIVINILOQUAX Laur. ; Dum. & Bibr.

On a couple of these boas from Dominica the transverse series number sixty-five in each case.

UNGUALIA MELANURA Schleg. ; Gray.

Cuba. Scales in twenty-seven rows, the outer five of each side smooth; transverse series 214 + 41.

UNGUALIA MACULATA Bibr. ; Gray.

Cuba. According to Bibron this form has twenty-five rows of scales, in 200 + 35 to 40 transverse series.

UNGUALIA HAETIANA Cope.

Hayti. Scales in twenty-seven rows; ventral scutes 193 + 38. Loreals and anterior pair of prefrontals fused.

UNGUALIA CURTA, nom. sp. n.

U. maculata Cope, not of Bibron. Cuba. Scales in twenty-five rows; ventrals 154 + 27. Loreals fused with the anterior prefrontals. Prof. Cope's specimens gave the species twenty-three to twenty-five rows, and 142 to 150 ventrals. The markings of this snake are somewhat like those of *U. maculata*. In the dorsal series the blotches have white lateral margins.

XIPHOSOMA HORTULANUM L.; Fitz.

Trinidad, Grenada, St. Vincent, Petit Martinique, Grenadines. The total length of the largest is six feet three inches, of which the tail is thirteen. Excessive variations in color are shown by these examples; one from Trinidad is light yellowish olive clouded with brown, with edges of scales brown, and ventrals yellow blotched with darker. The markings are obsolete on others not nearly so large. One from Grenada has the marks very distinct, black with light borders; a second is similar as regards their shapes but the spots are faint; and a third is nearly uniform brownish, with yellow ventral surface, and an indistinct trace of a blotch here and there. A St. Vincent type is very dark; the blotches are large, black, and continued down the flank as rather broad vertical bars; the top of the head is vermiculated with brown. That from Petit Martinique is very distinctly marked; the ground color is grayish and the blotches are black, with white margins. One from the Grenadines is of the average, another is a uniform dingy yellow, as if the brown pigment had entirely disappeared, leaving no traces of the markings. Dorsal rows 39-43; ventrals 256-285, subcaudals 107-117.

EPICRATES CENCHRIA L.; Wagl.

Trinidad. One of these has a single labial in contact with the eye on each side; on the left it is the sixth and on the right the seventh. Another has the sixth and seventh in the orbit on one side and the seventh and eighth on the other. The markings are very indistinct.

HOMALOCHILUS STRIATUS Fisch.

Hayti.

HOMALOCHILUS STRIGILATUS Cope.

Andros island, Bahamas.

CHILABOTHURUS INORNATUS Reinh.; D. & B.

Bayamon, Porto Rico. This species is very common along the streams on the branches of the trees. It is easily taken by means of a stick bearing a noose of strong twine.

RHABDOSOMA LINEATUM.

Dumeril & Bibron, 1854, Erp. Gen., vii, 105, describe this species from Java. There is no doubt that the specimens described below came from Trinidad; they were taken by the writer near Port of Spain. Prof. Jan has already questioned the locality given by Dum. & Bibr., most likely with reason. Prof. Cope tells me he also has noted the species from Trinidad. The individual variations are so great that we may yet have to include Jan's *R. punctivittatum*.

Body stout, cylindrical; head not distinct from neck, subconical, slightly depressed; tail short, thick, pointed. Eye small, pupil round. Crown-shields nine; internasals small, short; prefrontals large, long, narrow in front, broad behind, entering the orbit; frontal subtriangular, as broad as long, acute-angled between the parietals; supraoculars small, broad; parietals large, wide; nasals divided, nostril in the anterior half, both anterior angles acute. Loreal widest in front, long; entering the orbit in one specimen, not fused with the anteorbital in another. Post-orbitals two; temporals 1 + 2, upper elongate. Labials eight, first small, eighth large, fourth and fifth in orbit. Lower labials eight, fourth and fifth largest; submentals one pair, large, in contact each side with first four lower labials, separated from the small mental by the first pair. Scales smooth, broad, in fifteen rows. Anal entire. Ventrals 146, 136; subcaudals thirteen pairs in one, eighteen in the other. Total length 8.5, tail 0.5 inches.

Color light reddish brown, punctulate with brown. A median narrow streak of brown from the occiput, another on the upper edge of the third and lower edge of the fourth, and another on the upper edge of the first and lower edge of the second rows. Belly white (? red or yellowish in life). Head darker, clouded. On one specimen the edges of the scales are darker.

LIOPHIS COBELLA L.; Wagl.

Trinidad. Rows 17; ventrals 157; anal bifid; subcaudal 62 pairs.

DROMICUS DUMERILII.

Calamaria dumerilii Bibr.

Urotheca dumerilii Bibr.

Rows 17; ventrals 153; anal bifid. The specimen agrees well with the description except in the number of ventrals, which was 123, twenty-five less than in the present.

DROMICUS CURSOR LaC.

Martinique. Scales in seventeen rows, with one pore. Ventrals 194, 191, 191, 186, 185. Anal bifid. Subcaudals 106, 103, 101 pairs.

The name *cursor* was given to this species by LaCépède in 1789, Quad. Ovip. et Serp., ii, pp. 96, 280, Pl. xiv, f. 2. Donndorff from this figure and description renamed it *fugitivus* in 1798, Zool. Beytr., iii, 206.

DROMICUS CURSOR, var. PLEII.

Dromicus pleii D. & B.

Martinique, in the low-lands near Fort de France. Rows 17; ventrals 195, 193, 192, 190; anal bifid; subcaudals 107, 104, 101 pairs.

These specimens are much lighter-colored than those from the heights; the colors are more olivaceous, and the bands are as in the original description.

DROMICUS CUBENSIS, nom. sp. n.

Cuba. This is the *D. cursor* of Bibron, but not of LaCépède. Rows 17; ventrals 149, 145, 145, 142, 140; anal bifid; subcaudals 87, 92, 94, 106 pairs. Near the base of the tail some of the scales bear two pores; farther forward but one may be discovered, and anteriorly they become obsolete.

DROMICUS JULIÆ Cope, sp.

Dominica. Rows 17; one pore; ventrals 157, 161, 162; anal bifid; subcaudals 77, 84 pairs.

On a variety of this species found in Marie Galante the marks are not so black as on those from Dominica. Instead of a bright yellow spot near the middle of the scale, the lighter portion is more olive and the coloring is more irregularly placed. Ventrals 161, 164; subcaudals 82, 81 pairs.

DROMICUS ORNATUS, sp. n.

St. Lucia. Rows 17; one pore; ventrals 190, four 191 each, 194; anal bifid; subcaudals 86, 85, 88, 86, 91 pairs.

This handsome serpent is much like the Couresse of Martinique. Its tail appears to be a trifle shorter; its colors distinguish it very readily. From neck to end of tail it has a median band of brown, which on the body is about six scales wide and which contains two rows of round or squarish spots of white larger than a single scale and separated from each other by spaces of like width. On the third row there is a dark stripe in which the scales are marked with a yellow spot. The anterior edges of the ventrals are black. A black band behind the eye; a yellow spot on the lateral edge of each parietal; two or three transverse yellow streaks on the snout. Ground color of labials and lower surface yellowish or white. *D. cursor* has a white vitta at each side of a black band of five or six scales in width; anteriorly the vitta is more or less broken into spots but the included band lacks the two series of spots.

DROMICUS TEMPORALIS Cope.

This appears to be the species figured by Jan and Sordelli under the name of *D. nuntius*. The specimen which served as type of *D. temporalis* has the locality Cuba. It has seventeen rows; pores not visible; ventrals 166; anal bifid; loreal and anteorbital fused on both sides.

DROMICUS PARVIFRONS Cope.

Hayti. Jeremie, Hayti. Rows 19; no pores; ventrals 142 on each of three specimens, 143; subcaudals 113, 118, 113, 119 pairs.

DROMICUS MELANOTUS Shaw, sp.

Trinidad; Grenada. Rows 17; one pore; ventrals 147, 149, 153, 149; anal bifid; subcaudals 59, 62, 59, 65 pairs.

The dorsal black band is five whole and two half scales in width; the white line at each side of it is two half scales wide, as also the black line on the flank; the yellow or pinkish of the abdomen extends over three and a half of the outer rows. Anteriorly the lateral black lines are broken into spots and in the black vertebral band there are small whitish spots.

DROMICUS EXIGUUS Cope.

St. Thomas. Rows 19; ventrals 139, 140; anal bifid; subcaudals 80, 83 pairs. One has the prefrontals fused on the median line.

ALSOPHIS ATER Gosse; Cope.

Kingston, Jamaica. Rows 17; pores 2; ventrals 171, 180, 185; anal bifid; subcaudals 162, 149, 144 pairs.

ALSOPHIS ANTILLENIS Schleg.; Fitz.

St. Thomas; Hayti. Eight specimens at hand have nineteen rows each; 172 to 181 ventrals; and the subcaudals range from 134 to 142 pairs.

ALSOPHIS ANGULIFER Bibr., sp.

Cuba; Havana, Cuba. Rows 17; ventrals 164, 167, 169, 167; subcaudals 102, 114, 108, 108 pairs.

ALSOPHIS CAYMANUS Garm.

Grand Cayman. A variety of the preceding.

ALSOPHIS RUFIVENTRIS D. & B.

St. Kitts; Saba; Nevis. On each of twenty-two specimens the number of rows is twenty three; the ventrals range from 208 to 220, and the subcaudals 114 to 122. On nine the tail is mutilated. Apparently there is a special cause for the prevalence of the mutilation in particular localities.

ALSOPHIS CINEREUS Garm.

St. Barts; Anguilla. Six from St. Barts have the scales in twenty-one rows; the ventrals ranging from 203 to 207, and the subcaudals from 115 to 122. They are darker than the following. Six from Anguilla have twenty-one rows each; ventrals 201 to 203, and the subcaudals 99 to 115. These are more ashy in color than those from St. Barts, which are darker than

the allied species from St. Kitts, Saba and Nevis. They form a variety of the preceding.

ALSOPHIS SIBONIUS Cope.

Dominica. Rows 19; pores two; ventrals 198.

This specimen disagrees in several particulars from the original description. The agreements, however, are so exact, when occurring, that the variations are most likely to prove individual. The temporals are 1-1-2-3, the anterior on each side being divided vertically in such manner as to leave a short piece in contact with the orbitals; the seventh labial is large; each parietal has five or six scales in contact with its outer border. In color it is almost black. A black band waves from side to side on the back, its concavities being marked by triangular spots of white. A series of black spots on the middle of the flank, much fused; a series of smaller ones on the outer edges of the ventrals and on the first row of scales. Forward the ventral surface is yellow with black specks; behind the middle the white disappears on back and belly in a uniform black.

ALSOPHIS MELANICHNUS Cope.

Bayamon, Porto Rico. Rows 17; pores two; ventrals 169, 170; subcaudals 125, 129; loreal pentagonal; lower postorbital very narrow, about one-third as large as the upper; temporals 1-2-3. The narrowness of the lower postorbital is a good distinguishing character. On young specimens the dark-bordered scales are distributed in such way as to form irregular transverse bands, more indistinct in larger ones.

ALSOPHIS PULCHER, sp. n.

Testigos island. Rows 17; two pores; ventrals 190; anal bifid. Head distinct, broad behind; body slightly compressed; tail mutilated. Labials nine, fourth, fifth and sixth in the orbit, eighth largest; lower labials eleven, sixth largest. Loreal low, upper edge horizontal. One anteorbital; two postorbitals. Snout rounded, rostral, internasals, and prefrontals convex. Prefrontals bent down to meet the loreal. Loreal region concave. Temporals irregular 2-2-2. Frontal broad and truncate anteriorly, narrow and rounded behind.

Brownish-yellow, darker in front, with a median black edged band of yellowish-brown on the back, five scales and two halves in width. At each side of this there is a yellow band, one scale and two half scales in width, margined by a dark streak. On the flank the yellow band is margined by a dark streak occupying half of each of the second and third rows. Each ventral is marked on its outer-anterior edge by a black spot, which forms a zigzag line along the edge of the abdomen. Belly yellow; chin and throat blotched with dark brown. A dark streak from the nostril through the eye. Toward the neck the amount of black on the scales is much greater and the dorsal band appears as if composed of three.

IALTRIS VULTUOSUS Cope.

Jeremie, Hayti; types. Rows 19; two pores; ventrals 182-188; anal bifid; subcaudals 105, may be a little shortened.

HYPsirhynchus SCALARIS Cope.

Jeremie, Hayti; type. Rows 19; one pore; ventrals 166; anal bifid.

HERPETODRYAS CARINATUS L.; Boie.

Kingston, St. Vincent. Two specimens. Rows 12, outer smooth; ventrals 173, 164; anal bifid; subcaudals 162, 153 pairs.

HERPETODRYAS BODDERTII Seetz.; Schleg.

Kingston, St. Vincent; Trinidad. Rows 17; pores two; ventrals 191, 195, 202, 204, 200, 194, 196, 204; subcaudals 118, 105, 110, 118, 122, 124, 127, 118 pairs.

UROMACER OXYRHYNCHUS Dum. & Bibr.

Hayti. Rows 19; ventrals 200; anal bifid. The bluish-green of the back shades gradually into the light color of the belly; there are no punctulations; the white line on the flank is narrow, obsolete on the anterior third of the length, distinct on the remainder of the body and the base of the tail. The snout is less sharp than in the variety.

Var. A. Samana, San Domingo.

Rows 19; ventrals 192; anal bifid; subcaudals 199 pairs. Snout acute. Color grass-green; white band on the outer row occupies nearly the whole scale, is very distinct and extends over half the length of the tail; abdomen gray, punctulate with brown, and with a few scattered small spots of black.

UROMACER INORNATUS, sp. n.

Jeremie, Hayti. Four examples. Rows 17; ventrals 182, 184, 188, 190; anal bifid; subcaudals 201 on the only entire. Snout more blunt than *U. oxyrhynchus*. Color nearly the same on back and belly; bluish-green punctulate with brown.

UROMACER CATESBYI Schleg.; D. & B.

Jeremie, Hayti. Rows 17; ventrals 163 in three and 165 in the fourth; anal bifid; subcaudals 181 pairs in one, 206 in another.

DRYIOPHIS ÆNEUS Wagl.; Cuv.

One specimen of five from Trinidad has fifteen rows of scales; the others have seventeen. Ventrals 192, 187, 177; subcaudals 177, 164, 162 pairs. One from Testigos islands has nine labials, the fifth and sixth in the orbit; it has seventeen rows, and 181 ventrals.

LEPTODEIRA ANNULATA L.; Fitz.

Trinidad. Rows 19; ventrals 178; subcaudals 90 pairs.

DIPSAS CENCHOA L.; Wied.

Trinidad. Rows 17; ventrals 247, 233, 247; subcaudals 158, 160, 165 pairs.

SCYTALE CORONATUM Schneid.; D. & B.

Grenada. Ventrals 195, 188, 186; subcaudals 73, 86, 85.

OXYRHOPUS PLUMBEUS Wagl.; Gthr.

Grenada. Rows 19; ventrals 233.

St. Lucia. Rows 17; ventrals 233, 232; subcaudals 71 pairs.

ELAPS RIISII Jan.

Trinidad. Ventrals 184, 186, 184; subcaudals 3 + 42 pairs, 17 + 25 pairs, 45 pairs; bands 30 + 9, 25 + 11, 25 + 10. Two postorbitals.

ELAPS LEMNISCATUS L.; Schneid.

Trinidad. Ventrals 221; subcaudals 36 pairs; bands 36, eleven groups of three.

TRIGONOCEPHALUS LANCEOLATUS Oppel.

Martinique. Rows 31, 32, 33; ventrals 217, 220, 223; subcaudals 53, 68, 59 pairs.

TRIGONOCEPHALUS CARIBBÆUS, sp. n.

St. Lucia. Labials 7 to 8; lower labials 8 to 11. Rows of scales 25, 27, 27; ventrals 197, 206, 209; subcaudals 64, 69 pairs. This serpent is more slender than that from Martinique; it has narrower scales and not nearly so many of them. In color the tendency is toward olive, more or less uniform; the brown blotches being almost obsolete in cases. Belly whitish to yellowish, with few or no punctulations. Individuals vary from light olive with white belly to dark olive-brown with yellowish ventrals.

The Martinique serpent is brown rather than olive; the brown blotches are more distinct, and the punctulations on dorsals and outer portions of ventrals are abundant; the bellies are yellow. Individuals vary from yellow to black.

This is the *Craspedocephalus atrox* of Lieut. Tyler, 1849. Pr. Zoöl. Soc. Lond., 100, but is not that species, as found on the mainland, to which the name was originally given by Linné, Laurenti, Gray, Fitzinger and others.

TESTUDINATA.

TESTUDO TABULATA Walbaum.

Abundant in the market at Port of Spain, Trinidad. Secured also at St. Vincent and St. Lucia. It feeds readily in captivity and is kept about the houses and carried from place to place much as the more common domestic animals.

EMYS RUGOSA Shaw ; Gray.

From the markets at San Juan, Porto Rico, and from Cuba.

CINOSTERNUM sp.

A small turtle, sent by Prof. Felipe Poey, of Havana, possesses characters that separate it from both of the species, *C. pennsylvanicum* and *C. leucostomum*, which it approaches most nearly.

It is elongate; the snout is narrower and more pointed than that of the first-mentioned species. The greatest length of the carapace is exactly four, its greatest width two and three-fourths, behind the middle, the greatest length of the plastron three and nine-tenths, and the width of the plastron across the pectoral shields is one and nine-tenths inches. Anteriorly the plastron is rounded; posteriorly it is truncate, with a shallow notch between the anal shields. The pair of pectoral shields, like the pair of preanals, meet on the median line in a suture of about three-eighths of an inch. A single pair of barbels close together under the lower jaw.

Color light yellowish-olive with darker margins to the shields. Head sprinkled with light spots. A narrow streak of light color passes around the snout on the rostral angle above the eye and along the side of the head to the neck.

CHELONIA MYDAS L.; Schweigger.

At certain feeding grounds among the leeward islands a great many of these turtles are taken for shipment to various ports. In the same resorts "Loggerheads," "Shell turtles," and "Trunkbacks" are said to occur.

CROCODILIA.

CROCODILUS RHOMBIFER Cuv.

From Cuba.

CROCODILUS AMERICANUS Schneid.

The collections contain specimens from Jamaica, Hayti and Cuba.